



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,526	01/12/2004	Takeshi Aoyagi	00862.023398.	8247

5514 7590 04/28/2008
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

WOLDEMARIAM, AKILILU K

ART UNIT	PAPER NUMBER
----------	--------------

2624

MAIL DATE	DELIVERY MODE
-----------	---------------

04/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/754,526	Applicant(s) AOYAGI, TAKESHI	
	Examiner AKLILU k. WOLDEMARIAM	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/09/2004, 01/12/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. Applicant's amendment filed on January 14, 2008 has been entered. Claims 1-14 are still pending, with claims 1, 4, 7, 9, 11 and 13 being an independent.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,4, 7, 9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura et al., Shimomura (U.S. Patent number 6,427, 025 B1)in view of Ito et al., Ito (U.S. Publication number 2003/0086127 A1) and further in view of Freeman et al., Freeman (U.S. Publication number 2003/0056146A1).

Regarding claims 1 and 4, Shimomura discloses an image processing apparatus and an image processing method comprising a compression unit which compresses image data (see column 11,lines 59-60 & column 12, lines 21-22);

a data amount calculation unit which obtains a data amount of the image data compressed by the compression unit (see column 16, lines 7-9 & 38-40, Fig.7); a determination unit which determines whether the data amount calculated by the data amount calculation unit exceeds a capacity of a memory (see column 25, lines 6-8 & column 16, lines 10-15);

a control unit (see column 12, lines 38) which performs control to increase a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit, make the compression unit compress the image data, and store the image data in the memory (see column 12, lines 4142);

a holding unit which holds the counted number of times (see column 16, lines 38-40 & Fig. 57); and

a decoding unit which decodes the data stored in the memory (see column 28, lines 67-68) on the basis of the number of times held by the holding unit.

Shimomura does not disclose that a control unit to increase's compression ratio and a counting unit which counts the number of times; the determination unit determined that the data amount exceeded the capacity of the memory. However Ito discloses that a control unit to increase's Compression ratio of the determination unit (see paragraph [006] and paragraph [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit in order to minimize the memory size, [Ito's see paragraph [0012] and paragraph [0283]].

Shimomura and Ito do not disclose a counting unit, which counts the number of times, and the determination unit determined that the data amount exceeded the capacity of the memory.

However, Freeman discloses a counting unit which counts the number of times (page 3, paragraph [0030] lines 17 to page 4, lines 1-4) the determination unit determined that the data amount exceeded the capacity of the memory (page 3, paragraph [0030] lines 17 to page 4, lines 1-4).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Freeman's a counting unit which counts the number of times in the combined image processing apparatus and image processing method of Shimomura and Ito image compression unit because it will allow to determine the difference between the slow memory capacity required and the free capacity of the slow memory, [Freeman's, see paragraph [0007]].

Regarding claims 7 and 9, Shimomura discloses an image processing apparatus comprising a compression unit which compresses image data (see column 11, lines 59-60 and column 12, lines 21-22, Fig.1);

a data amount calculation unit which obtains a data amount of the image data compressed by the compression unit (see column 16, lines 7-9 and lines 38-40, Fig.7);

a determination unit which determines whether the data amount calculated by the data amount calculation unit exceeds a capacity of a memory (see column

25, lines 6-8 and column 16, lines 10-15) a control unit (see column 12, line 38) which performs control to increase a compression ratio of the compression unit in accordance with a determination result obtained by said determination unit, make said compression unit compress the image data, and store the image data in the memory (see column 12, lines 41-42); and

a holding unit (see column 16, lines 38-40 and Fig. 57) which holds the counted number of times; to decode the data stored in the memory.

Shimomura does not disclose that a control unit to increase's Compression ratio and a counting unit, which counts the number of times the determination unit, determined that the data amount exceeded the capacity of the memory.

However Ito discloses that a control unit to increase's compression ratio of the determination unit (column 1 paragraph [006] & column 16 paragraphs [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit in because it will allow to minimize the memory size, [Ito's, see paragraph [0012] and paragraph [0283]].

Shimomura and Ito do not disclose a counting unit, which counts the number of times the determination unit, determined that the data amount exceeded the capacity of the memory. However, Freeman discloses a counting

unit which counts the number of times (page 3, paragraph [0030] lines 17 to page 4, lines 1-4) the determination unit determined that the data amount exceeded the capacity of the memory (see page 3, paragraph [0030] lines 17 to page 4, lines 1-4).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Freeman's a counting unit which counts the number of times in the combined image processing apparatus and image processing method because it will allow to determine the difference between the slow memory capacity required and the free capacity of the slow memory, [Freeman's, see paragraph [0007]].

Regarding to claims 11 and 13, Shimomura discloses an image processing apparatus, which, on a coding side for image data, obtains a data amount of compressed image data (see column 11, lines 59-60 and column 12, lines 21-22), Determines whether the obtained data amount exceeds a capacity of a memory (see column 25, lines 6-8 and column 16, lines 10-15) increases a compression ratio in the compression in accordance with the determination, compresses the image data, and decodes the compressed image data stored in the memory (see column 12, lines 41- 42), comprising and a decoding unit which decodes the data stored in the memory (see column 27 lines 15-19) in accordance with the number of times stored in the holding unit.

Shimomura does not disclose that a control unit to increase's compression ratio and a holding unit which holds the number of times it was determined that

the data amount exceeded the capacity of the memory in coding operation on the coding side.

However Ito discloses that a control unit to increase's compression ratio (see paragraph [006] and paragraph [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit because it will allow to minimize the memory size, [Ito's, paragraph [0012] and paragraph [0283]].

Shimomura and Ito do not disclose a holding unit which holds the number of times it was determined that the data amount exceeded the capacity of the memory in coding operation on the coding side.

However, Freeman discloses a holding unit which holds the number of times it was determined that the data amount exceeded the capacity of the memory in coding operation on the coding side (see page 3, paragraph [0030] lines 17 to page 4, lines 1-4).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Freeman's a counting unit which counts the number of times in the combined image processing apparatus and image processing method because it will allow to determine the difference

between the slow memory capacity required and the free capacity of the slow memory, [Freeman's, see paragraph [0007]].

4. Claims 2, 3, 5, 6, 8, 10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura in view of Ito in view of Freeman as applied to claims 1, 4, 7, 11 and 13 above and further in view of Honma et al., " Honma" (U.S. Patent number 6,198,848B1).

Regarding claims 2 and 5, Shimomura and Ito disclose the apparatus according to claim 1 and the method according to claim 4, wherein the compression unit comprises an orthogonal transform unit, which orthogonally transforms image data a quantization unit which quantizes coefficients orthogonally transformed by the orthogonal transform unit in accordance with a quantization table, a shift unit which shifts the coefficients quantized by the quantization unit to change the compression ratio and a coding unit which codes the coefficients shifted by the shift unit (see paragraph [0231]).

Shimomura and Ito do not disclose the compression Unit comprises an orthogonal transform unit which orthogonally transforms image data a quantization unit which quantizes coefficients orthogonally transformed by the orthogonal transform unit in accordance with a quantization table.

However Honma discloses the compression unit comprises an orthogonal transform unit, which orthogonally transforms image data (column 3, lines 14-15) a quantization unit, which quantizes coefficients orthogonally transformed by the

orthogonal transform unit (see column 3 lines 32-41) in accordance with a quantization table (see column 4, lines 44-47).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Honma's orthogonal transformation unit in the combined image processing apparatus Shimomura and Ito compression unit because it will allow to quantize the image data, [Honma, see column 5, lines 60-64].

Regarding claims 3 and 6, Shimomura and Ito disclose the apparatus according to claim 2 and the method according to claim 5, wherein the decoding unit (column 27 lines 15-19) performs decoding upon setting a quantization table corresponding to the held number of times (see column 16, lines 38-40 and Fig.57), and Honma discloses a quantization table (see column 4, lines 44-47).

Regarding claims 8 and 10, Shimomura and Ito disclose the apparatus according to claim 7 and the method according to claim 9, wherein the holding unit holds the number of times (see column 16, lines 38-40 and Fig. 57) to determine a quantization table to be used to decode the data stored in the memory.

Shimomura and Ito do not disclose the determining a quantization table to be used to decode the data stored in the memory.

However, Honma discloses the determining a quantization table to be used to decode the data stored in the memory (see column 4, lines 44-47).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Honma's quantization table in the combined image processing apparatus Shimomura and Ito compression unit because it will allow to compress image to desired size, [Honma, see column 4, lines 40-41].

Regarding claims 12 and 14, Shimomura and Ito disclose that the apparatus according to claim 11, & the method according to claim 13, wherein said holding unit holds the number of times (see column 16, lines 38-40 and Fig.57) to determine a quantization table to be used to decode the data stored in the memory (see column 27, lines 15-18).

Shimomura and Ito do not disclose the determining a quantization table to be used to decode the data stored in the memory.

However, Honma discloses the determining a quantization table to be used to decode the data stored in the memory (see column 4, lines 44-47). It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Honma's quantization table in to [Shimomura and Ito] compression unit because it will allow to compress image to desired size, [Honma, see column 4, lines 40-41].

Response to Amendment

5. Applicant's arguments filed on January 14, 2008 have respectfully considered, but they are not persuasive. Regarding 35 U.S.C 103 rejection of claim inventions, the applicant argued that with references (Shimomura, Ito and

Freeman) do not disclose the claim inventions. The examiner disagree because regarding claims 1 and 4, Shimomura discloses an image processing apparatus and an image processing method comprising a compression unit which compresses image data (see column 11, lines 59-60 & column 12, lines 21-22);

a data amount calculation unit which obtains a data amount of the image data compressed by the compression unit (see column 16, lines 7-9 & 38-40, Fig. 7);

a determination unit which determines whether the data amount calculated by the data amount calculation unit exceeds a capacity of a memory (see column 25, lines 6-8 & column 16, lines 10-15);

a control unit (see column 12, lines 38) which performs control to increase a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit, make the compression unit compress the image data, and store the image data in the memory (see column 12, lines 41-42);

a holding unit which holds the counted number of times (see column 16, lines 38-40 & Fig. 57); and

a decoding unit which decodes the data stored in the memory (see column 28, lines 67-68) on the basis of the number of times held by the holding unit.

Shimomura does not disclose that a control unit to increase's compression ratio and a counting unit which counts the number of times; the determination unit determined that the data amount exceeded the capacity of the memory.

However Ito discloses that a control unit to increase's Compression ratio of the determination unit (see paragraph [006] and paragraph [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit in order to minimize the memory size, [Ito's see paragraph [0012] and paragraph [0283]].

Shimomura and Ito do not disclose a counting unit, which counts the number of times, and the determination unit determined that the data amount exceeded the capacity of the memory.

However, Freeman discloses a counting unit which counts the number of times (page 3, paragraph [0030] lines 17 to page 4, lines 1-4) the determination unit determined that the data amount exceeded the capacity of the memory (page 3, paragraph [0030] lines 17 to page 4, lines 1-4).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Freeman's a counting unit which counts the number of times in the combined image processing apparatus and image processing method of Shimomura and Ito image compression unit because it will allow to determine the difference between the slow memory capacity required and the free capacity of the slow memory, [Freeman's, see paragraph [0007]].

Regarding claims 7 and 9, Shimomura discloses an image processing apparatus comprising a compression unit which compresses image data (see column 11, lines 59-60 and column 12, lines 21-22, Fig. 1);

a data amount calculation unit which obtains a data amount of the image data compressed by the compression unit (see column 16, lines 7-9 and lines 38-40, Fig. 7);

a determination unit which determines whether the data amount calculated by the data amount calculation unit exceeds a capacity of a memory (see column 25, lines 6-8 and column 16, lines 10-15) a control unit (see column 12, line 38) which performs control to increase a compression ratio of the compression unit in accordance with a determination result obtained by said determination unit, make said compression unit compress the image data, and store the image data in the memory (see column 12, lines 41-42); and

a holding unit (see column 16, lines 38-40 and Fig. 57) which holds the counted number of times; to decode the data stored in the memory.

Shimomura does not disclose that a control unit to increase's Compression ratio and a counting unit, which counts the number of times the determination unit, determined that the data amount exceeded the capacity of the memory.

However Ito discloses that a control unit to increase's compression ratio of the determination unit (column 1 paragraph [006] & column 16, paragraph [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit in because it will allow to minimize the memory size, [Ito's, see paragraph [0012] and paragraph [0283]].

Shimomura and Ito do not disclose a counting unit, which counts the number of times the determination unit, determined that the data amount exceeded the capacity of the memory. However, Freeman discloses a counting unit which counts the number of times (page 3, paragraph [0030] lines 17 to page 4, lines 1-4) the determination unit determined that the data amount exceeded the capacity of the memory (see page 3, paragraph [0030] lines 17 to page 4, lines 1-4).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Freeman's a counting unit which counts the number of times in the combined image processing apparatus and image processing method because it will allow to determine the difference between the slow memory capacity required and the free capacity of the slow memory, [Freeman's, see paragraph [0007]].

Regarding to claims 11 and 13, Shimomura discloses an image processing apparatus, which, on a coding side for image data, obtains a data amount of compressed image data (see column 11, lines 59-60 and column 12, lines 21-

22), Determines whether the obtained data amount exceeds a capacity of a memory (see column 25, lines 6-8 and column 16, lines 10-15) increases a compression ratio in the compression in accordance with the determination, compresses the image data, and decodes the compressed image data stored in the memory (see column 12, lines 41- 42), comprising and a decoding unit which decodes the data stored in the memory (see column 27 lines 15-19) in accordance with the number of times stored in the holding unit.

Shimomura does not disclose that a control unit to increase's compression ratio and a holding unit which holds the number of times it was determined that the data amount exceeded the capacity of the memory in coding operation on the coding side.

However Ito discloses that a control unit to increase's compression ratio (see paragraph [006] and paragraph [0283]).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Ito's increase compression ratio in Shimomura's control unit to increase's a compression ratio of the compression unit in accordance with a determination result obtained by the determination unit because it will allow to minimize the memory size, [Ito's, paragraph [0012] and paragraph [0283]].

Shimomura and Ito do not disclose a holding unit which holds the number of times it was determined that the data amount exceeded the capacity of the memory in coding operation on the coding side.

However, Freeman discloses a holding unit which holds the number of times it was determined that the data amount exceeded the capacity of the memory in coding operation on the coding side (see page 3, paragraph [0030] lines 17 to page 4, lines 1-4).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Freeman's a counting unit which counts the number of times in the combined image processing apparatus and image processing method because it will allow to determine the difference between the slow memory capacity required and the free capacity of the slow memory, [Freeman's, see paragraph [0007]].

Freeman also discloses compression *[see paragraph [0024] lines 23-34, Image data may be stored in different formats corresponding to different amount of memory space to store the image data. As an example, image data stored in the JPEG format occupies more memory space than image data stored in the bitmap format).*

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AKLILU k. WOLDEMARIAM whose telephone number is (571)270-3247. The examiner can normally be reached on Monday-Thursday 6:30 a.m-5:00 p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/754,526
Art Unit: 2624

Page 18

/Samir A. Ahmed/
Supervisory Patent Examiner, Art Unit 2624

Samir Ahmed,
Examiner
Art Unit 2624

A.W.
04/09/2008